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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,460	12/26/2001	Pim Theo Tuyls	PHNL 010209	4259

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EXAMINER	
GUHARAY, KARABI	
ART UNIT	**PAPER NUMBER**
2879	

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/019,460	TUYLS ET AL.	
	Examin r	Art Unit	
	Karabi Guharay	2879	MW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment , filed on 11/02/03*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *11-17* is/are allowed.

6)☒ Claim(s) *1-3,5,9 and 10* is/are rejected.

7)☒ Claim(s) *4, 6-8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Priority

The photocopies of Priority documents have not been forwarded from International Bureau to this US national stage application.

Amendment, filed on 11/02/03 has been considered and entered.

Amendment of Abstract overcomes the objection to the Abstract.

Claims 1-10 are amended.

Claims 11-17 are added.

Claim Objections

Claim 8 is objected to because of the following informalities:

Claim 8 does not end with a period. Each claim should begin with a capital letter and end with a period. Periods may not be used elsewhere in the claims except for abbreviations. See Fressola v. Manbeck, 36 USPQ2d 1211 (D.D.C. 1995). MPEP 608.01(m). Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 5 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ji (US 5637955).

Regarding claim 1, Ji discloses a deflection unit 20 (Fig 5 and Fig 8), for a cathode ray tube (Fig 1) comprising line deflection coils (horizontal deflection coil 22),

frame deflection coils (vertical deflection coil 24) surrounding the line deflection coils 22, and a yoke ring (ferrite core 23) having a permeability (μr) surrounding the frame deflection coil 24 (lines 18-25 of column 2), wherein the deflection unit comprises a magnetic material (plastic magnetic material, lines 25-31 of column 2) present between the line deflection coil (22) and the frame deflection coil (24, see Fig 7), and has a magnetic permeability $\mu 1$.

Though Ji doesn't explicitly disclose that the permeability of the yoke ring (μr) (made of ferrite) is greater than the permeability of the magnetic material $\mu 1$ (a plastic magnetic material, made of molten plastic mixed with ferrite powder), it is within the teaching of Ji, since ferrite core has a high magnetic permeability (μr) while plastic being a low magnetic material, when mixed with ferrite powder lowers the permeability of the plastic ferrite mixture, by the inherent properties of materials used.

Regarding claim 2, Ji discloses void spaces (space between horizontal and vertical coils, Fig 7) and the void spaces are filled with magnetic material (plastic magnetic material).

Regarding claim 5, Ji discloses that the deflection unit (20) comprises a support (21) for carrying both the frame (24) and line coils (22, lines 18-24 of column 2), the support (21) comprising the magnetic material (lines 25-36 of column 2).

Regarding claim 9, Ji discloses a cathode ray tube assembly (Fig 1) comprising the deflection unit (claim 1 of column 3).

Regarding claim 10, Ji discloses a display apparatus (Fig 1, lines 7-16 of column 1) comprising a cathode ray tube of claim 9 (see rejection of claim 9). Though Ji is silent

about control electronics coupled to receive video signal to the CRT and the deflection signal to the deflection unit in dependence of VS, these are inherent in TV picture tube, which displays video signal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ji (Us 5637955) as applied to claim 1 above, and further in view of Vink et al. (US 6373181).

Regarding claim 3, Ji discloses all the claimed limitations of claim 3, except for the limitations of second void spaces between the frame deflection coils and the yoke ring, and third void spaces between wire strands of the frame deflection coils and the second and/or third void spaces are filled with a magnetic material having a magnetic permeability $\mu 2$ which is greater than or equal to the magnetic material having magnetic permeability $\mu 1$, between line deflection coil and frame deflection coil.

However, Vink et al. disclose a deflection yoke having second void spaces (54 of Fig 1) between the frame deflection coils 18 and the yoke ring 22, and third void spaces

(52 of Fig 2) between wire strands (50) of the frame deflection coils 18 and the second and third void spaces (54, 52) are filled with a magnetic material (56, lines 40-42 of column 2). Vink et al. further disclose that the magnetic material (56) is a plastic deformable material comprising resinous material containing a filler of magnetic particles such as plasto-ferrite (lines 66 of column 2-line 1 of column 3) which is the same material as the magnetic material (plastic magnetic body comprising plastic and ferrite particles, thus having same magnetic permeability) between frame deflection coil and line deflection coil of Ji's device. Vink et al. further teach that filling second and third void spaces by the magnetic material improves the short circuiting of the magnetic lines of flux outside the line deflection coils, and also reduces the external magnetic stray fields, thus increases the sensitivity of the line deflection.

Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to include second and third void spaces filled with plastic deformable magnetic material, as disclosed by Vink et al., in the deflection coil of the Ji, since this will improve short-circuiting of the magnetic lines of flux outside the line deflection coils, and will also reduce the external magnetic stray fields, thus will increase the sensitivity of the line deflection.

Allowable Subject Matter

Claims 4, and 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11-17 are allowed over the prior art of record.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 4, the prior art of record neither shows nor suggests the combination of limitations set forth in claim 4, particularly comprising the limitation of yoke ring comprising two parts, a first part being positioned closer to a neck portion of the cathode ray tube than a second part and only the void spaces surrounded by the first part of the yoke ring are filled with magnetic material.

Claims 6-8 are dependent on claim 4.

Regarding claim 11, the prior art of record neither shows nor suggests a deflection unit for a cathode ray tube including the combination of limitations set forth in claim 11, particularly comprising the limitation of the void spaces surrounded only by the first part of the yoke ring are filled with magnetic material.

Claims 12-17 are allowed for being dependent on allowed base claim 11.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure : Lee (US 6455997); Vink et al. (US 6373181)

Alioth (US 5515220): teaches that ferrite is a material having high magnetic permeability, while plastic is a material having low magnetic permeability.

JP 58186004A : teaches that a plastic magnet has a low magnetic permeability.

Kitagawa (US 5243127): teaches that in case of plastic ferrite magnetic permeability decreases because resin as a binder is inserted among ferrite powder.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (571) 272-2452. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

K. Guharay

Karabi Guharay
Patent Examiner
Art Unit 2879